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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,942	02/28/2005	Markus Scherer	266378US0PCT	2550

22850 7590 08/24/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SANDERS, KRIELLION ANTIONETTE

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/525,942

Applicant(s)

SCHERER ET AL.

Examiner

Kriellion A. Sanders

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 9-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/28/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

a. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-5 are indefinite in that it utilizes component A) to define component B).

Applicant has indicated Components A) and B) in claim 1 to be distinct components. The description of component B) is unclear.

Furthermore the claims lacks antecedent basis for the component B) described therein.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-8 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takigawa et al., US Patent No. 5,026,496 and further in view of Lange, US Patent No. 4,839,068.

Applicant's invention pertains to a stable polymer dispersion comprising:

A) At least one dispersed polyolefin

B) A dispersing component which may be a block copolymer comprising one or more of each of blocks A and X.

C) At least one ester

Art Unit: 1714

D) At least one ether compound comprising (oligo)oxyalkyl groups and which may comprise an ethoxylated alcohol.

E) A compound having a dielectric constant greater than or equal to 9, which may be selected from water, ethylene glycol, polyethylene glycol and alcohol.

Applicant's invention may be used to formulate lubricating oils.

Takigawa et al discloses a polymer composition or concentrate comprising: (A) an olefinic copolymer, (B) a copolymer of an olefin with a (meth)acrylate, (C) a poly(meth)acrylate, and (D) a surfactant, which is a solvent for both components (A) and (C), and which acts as a solubilizer or phase-stabilizer for components (A) and (C). The compositions are useful as an additive for a lubricating oil.

Suitable olefinic copolymers generally include copolymers of two or more olefins such as ethylene, propylene, butylene, iso-butylene, isoprene, butadiene and the like, as well as copolymers of these olefins with other monomers such as styrene, cyclopentadiene, dicyclopentadiene, ethylidene-norbornene and so on.

Suitable copolymers of olefins with a (meth)acrylate, as the component (B) in the present composition, include graft-copolymers obtained by grafting a (meth)acrylate under radical polymerization conditions onto an olefinic copolymer, random copolymers obtained by random-copolymerizing olefins with a (meth)acrylate, and block-copolymers obtained by anionic polymerization.

Poly(meth)acrylates, used as the component (C) in the invention, include (co)polymers obtainable from (meth)acrylates or combinations thereof with other monomers.

Surfactants, which are poor solvents for both components (A) and (C) which act as a solubilizer or phase-stabilizer for components (A) and (C) in combination with surface activity component (B), which exhibits surface activity, as a phase-stabilizer, used as component (D) in the invention, include oxyalkylated active hydrogen atom-containing compounds and mixtures of two or more of such compounds. Suitable surfactants include, for example, alkylene oxide adducts of compounds containing one or more active hydrogen atom-containing groups such as hydroxyl, amino and amide groups. The total polymer content, i.e., the total amount of (A), (B) and (C), is generally 30-60%, preferably 35-50%, based on the weight of the composition. The content of component (B) is at least 5%, preferably 10% -40%, based on the total weight of the polymer [(A)+(B)+(C)]. The content of the component (A) is preferably 10%-60%, more preferably 20%-50%; and the content of the component (C) is preferably 25%-80%, more preferably 30%-60%, based on the total weight of the polymer. The content of component (D) is usually 2-70%, preferably 2-35%, more preferably 5-20%, based on the weight of the composition. Polymer compositions according to the invention may further contain a mineral oil as component (E). Suitable mineral oils include those usually used as base oils for engine oils, for example, 60 neutral, 100 neutral, 150 neutral and 500 neutral oils, and mixtures of two or more of the oils. The total content of (D) and (E) in the composition is generally 40-70%, preferably 50-65%, based on the weight of the composition. The weight ratio of (E)/(D) generally ranges from 0/100-95/5, preferably 50/50-95/5, more preferably 70/30-90/10.

In producing polymer compositions comprising components (A), (B), (C) and (D) according to the invention, (D) may be added with stirring to polymerized products at any temperature between room temperature and the polymerization temperature, usually 80-

Art Unit: 1714

130.degree. C., the products having been prepared by polymerizing (meth)acrylates, and optionally other monomers, in situ in (A) dissolved in (E). A portion usually 50% or less, of (D) may be added to (E) before polymerization, followed by conducting polymerization and then adding the remainder of (D). Mixing may be performed using stirrers, which impart a high mechanical shear to material such as a homomixer. See col. 1, line 60 through col. 6, line 61.

Lange discloses additives for lubricants, which provide improved frictional characteristics and which, when used in lubricating oils, provide fuel economy improving benefits and which improve the viscosity characteristics of lubricating oils. The additives comprises polysuccinate esters prepared by the condensation reaction of a suitable polyhydric *alcohol* with the substituted succinic acids or anhydrides described, above.

The polyhydric alcohols useful in the preparation of the polysuccinate esters may contain up to about 8 hydroxyl groups, and may be linear or branched. Preferred polyhydric alcohols are *ethylene glycol*, neopentylene glycol, glycerol and pentaerythritol. Mixtures of polyhydric alcohols may be used. The polyhydric alcohols used in the preparation of the polysuccinate esters of this invention also may include polyethers or partial fatty acid esters of polyols. Useful polyethers include polyhydroxy polyalkoxy alkanes, such as diethylene glycol. Useful partial fatty acid esters will contain at least two hydroxyl groups. Glycerol monooleate is illustrative.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the polyhydric alcohols of Lange into the lubricant additives of Takigawa et al to formulate succinate esters and to derive improved frictional characteristics, fuel economy benefits and improved viscosity characteristics, absent a clear showing of

Art Unit: 1714


unexpected results attributable to the use of the alcohol components. Likewise, it would have been obvious to one of ordinary skill in the art to incorporate diethylene glycol of Lange into the lubricant additives of Takigawa et al, absent a clear showing of unexpected results attributable to the use of the alcohol components.

Claims 9-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kriellion A. Sanders
Primary Examiner
Art Unit 1714

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Application/Control Number: 10/525,942

Page 7

Art Unit: 1714